

I Claim:

1. The monoclonal or antigen binding fragment thereof, capable of recognizing a common antigenic determinant found on E-selectin and L-selectin.
2. The monoclonal antibody EL 246, or antigen binding fragment thereof secreted by a hybridoma having the ATCC Accession No. HB11049.
3. A method of inhibiting the adhesion of a first cell bearing a first selectin molecule to a second cell bearing a second selectin molecule, said selectin molecules being different, comprising:
- contacting said cells with the antibodies or antigen-binding fragments of claim 1 under conditions wherein the antibodies bind to the cells in an amount sufficient to prevent the first cell from binding to the second cell.
4. The method according to claim 3, in which the selectins are E-selectin and L-selectin.
5. The method according to claim 3, in which the monoclonal antibody is EL-246 secreted by a hybridoma having the ATCC Accession No. HB11049.
6. A cell line which secretes the monoclonal antibody according to claim 1.
7. The cell line having the ATCC Accession No. HB11049 which secretes the monoclonal antibody according to claim 2.
8. A method of detecting E-selectin and L-selectin bearing cells in biological sample suspecting of containing the selectin bearing cells comprising:
- a. contacting the sample with the antibodies or antigen-binding fragments of claim 1 to form an immune complex with the E-selectin and L-selectin bearing cells, and
- b. detecting the presence of the immune

complex.

9. A method for diagnosing inflammatory diseases comprising the method according to claim 8.

10. A method of treating a mammal with the intent of reducing tissue damage occurring at an inflammatory site in any part of the body of a mammal experiencing leukocyte-mediated inflammatory condition, said method comprising:

administering *in vivo* a monoclonal antibody in an amount sufficient to bind specifically to the of selectin molecules expressed on the surface of leukocytes and endothelial cells to inhibit the adhesion of said cells.

11. The method according to claim 10 in which said inflammatory site is located at the vascular endothelial cell interface or subcellular matrix of a body part.

12. The method according to claim 10 in which said inflammatory site involves endothelial tissue of a body part.

13. The method according to claim 10 in which said inflammatory site is in a joint of a body part.

14. The method according to claim 10 in which said inflammatory site is the result of a myocardial infarct.

15. The method according to claim 10 in which the monoclonal antibody is administered intravenously at a selected time period to or during said inflammatory condition.

16. The method according to claim 10 in which said monoclonal antibody binds to L-selectin and E-selectin expressing cells and does not bind to P-selectin.

17. A method of treating a mammal with the intent of reducing tissue damage occurring at an inflammatory site in the body of the mammal experiencing an inflammatory condition, said method comprising:

infusing into the body prior to or during said inflammatory condition a quantity of monoclonal antibody sufficient to bind specifically to an epitope expressed on the short consensus region express on the surface of leukocytes and which will inhibit the adhesion dependent intercellular reactions of leukocytes reflecting their immunological response function which contributes to such damage.

18. A pharmaceutical composition comprising the monoclonal antibody or antigen binding fragment according to Claim 1 and a pharmaceutically acceptable carrier.

19. The monoclonal antibody or antigen binding fragment according to claim 1, wherein the antibody or antigen binding fragment does not bind to P-selectin.

20. The monoclonal antibody or antigen binding fragment according to claim 1, wherein the antibody or antigen binding fragment selectively binds to L-selectin in humans, sheep, goats, cattle, and pigs.

21. The monoclonal antibody or antigen binding fragment thereof according to claim 1 wherein the antibody or antigen binding fragment is capable of inhibiting leukocyte rolling on an endothelial cell layer.

22. The monoclonal antibody or antigen binding fragment thereof according to claim 1 wherein the antibody or antigen binding fragment is capable of inhibiting lymphocyte homing to peripheral tissues.

23. The monoclonal antibody or antigen binding fragment thereof according to claim 1 wherein the antibody or antigen binding fragment is capable of inhibiting an inflammatory response in humans, sheeps, goats, cattle and pigs.

24. A monoclonal antibody capable of recognizing a common antigenic determinant found an E-selectin and L-

selectin produced by a process comprising:

(a) immunizing a mammal with an immunogen composed of E-selectin, L-selectin or a combination of E-selectin and L-selectin;

5 (b) fusing lymphocytes from the immunized mammal with myeloma cells;

(c) selecting hybrid cells that secrete antibodies that recognize a common antigenic determinant on L-selectin and E-selectin; and

(d) isolating the antibodies.

10 25. A process for producing monoclonal antibodies capable of binding to a common antigenic determinant on E-selectin and L-selectin comprising:

(a) immunizing a mammal with an immunogen composed of E-selectin, L-selectin or a combination of E-selectin and L-selectin;

15 (b) fusing lymphocytes from the immunized mammal with myeloma cells;

(c) selecting hybrid cells that secrete antibodies that recognize a common antigenic determinant on L-selectin and E-selectin; and

20 (d) isolating the antibodies.

26. A method of preventing or inhibiting an inflammatory response at a site in a mammal, said method comprising:

25 administration of an effective amount of a monoclonal antibody or antigen binding fragment thereof, said antibody or antigen binding fragment capable of binding to L-selectin and E-selectin, said amount prevents or inhibits the inflammatory response at the site.

30 27. The method according to claim 26 wherein the site is selected from the group consisting of a heart, lung, joint, brain, limb, blood vessel, lymph node, spleen, crush injury site, spinal cord or transplantation site.

28. The method according to claim 26 wherein the

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inflammatory response is caused by a myocardial infarction, shock, stroke, organ transplantation, crush injury, limb replantation, frostbite or lung ischemia/reperfusion injury.

5 29. The method according to claim 26 wherein the monoclonal antibody has a reactivity pattern similar to EL-246 which is secreted by a cell line having the ATCC. Accession No. HB 11049.

30. A method to prevent or inhibit leukocyte rolling on an endothelial cell layer comprising:

10 treatment of the leukocytes or the endothelial cell layer with an amount of the monoclonal antibody or antigen binding fragment according to claim 1, said amount is effective to prevent or inhibit leukocyte rolling.

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15 31. The method according to claim 30 wherein the endothelial cell layer is in a lymphatic vessel, artery, vein, or postcapillary venules.

32. A method to prevent or inhibit lymphocyte homing to peripheral tissue of a mammal comprising:

20 administration of an effective amount of the monoclonal antibody or antigen binding fragment according to claim 1, said amount prevents or inhibits the homing of lymphocytes from the blood to the peripheral tissue.

33. The method according to claim 32 wherein the peripheral tissue is Peyer's patches, mesenteric lymph nodes, peripheral lymph nodes, or spleen.

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